

**REMARKS**

Upon entry of this paper, claims 1, 17, 21, 23, 33, 37, and 39 have been amended, claim 49 has been canceled, and no claims have been added as new claims. Thus, claims 1-48 are presently pending in this application. No new matter has been added. The cancellation of claim 49 should in no way be construed to be an acquiescence to any of the rejections stated. Claim 49 is being canceled solely to expedite the prosecution of the present application. Applicants reserve the option to further prosecute the same or similar claims in the instant or a subsequent patent application.

Applicants gratefully thank the Examiner for the indication of allowability of claims 2-16, 18-32, and 34-38 if rewritten according to the suggestions stated in the official action. Applicants have amended the supporting independent claims (1, 17, and 33) to further clarify the present invention in accordance with the application as filed. Accordingly, Applicants respectfully submit that all claims pending in the present application are allowable as described herein.

**Claim Rejections – 35 USC § 102**

Claims 1, 17, 33 and 49 were rejected under 35 USC 102(e) as being anticipated by Bergold (6,571,135). Claims 1, 17 and 33 were rejected under 35 USC 102(a) as being anticipated by Ulyanov (2004/0039555). Independent claims 1, 17, and 33 have been amended, and claim 49 has been canceled. Applicants provide additional remarks as to the patentability of the pending claims over the cited references below.

Claims 1, 17, and 33 have all been amended to clarify that the implementation of the artificial algebraic loop solution “modifies a manner by which the plurality of functions forming the potential artificial algebraic loop execute, while maintaining an outcome of the potential artificial algebraic loop solution” (*see* amended claims 1, 17, and 33). Applicants submit that both Bergold and Ulyanov describe methods that rely upon the introduction of a delay function within the algebraic loop.

In the case of Bergold, the Office Action confirms that Bergold attempts to remove algebraic loops by introducing a “delay element 18” (*see* OA, paragraph 2, *see also* Bergold, C4, L66 to C5, L18). In the case of Ulyanov, as indicated in paragraphs [0053] to [0058], an integration block 202 is utilized in the solution of the algebraic loop. The integration block 202 is a form of delay, just as the delay element 18 is in Bergold. In both instances, the introduction of a delay element (or integrator element) into the algebraic loop does not “maintain an outcome of the potential artificial algebraic loop solution” but instead, alters the outcome because of the introduction of the delay. The present invention relies upon the reorganization of the functions forming the potential algebraic loop instead of the introduction of such functions as delays into the loop, which alter the outcomes of the loop relative to the solutions that would have resulted without the addition of the delays. Neither Bergold, nor Ulyanov discloses such a solution, method, or system.

Independent claims 1, 18, and 33 and therefore all claims depending therefrom are allowable because they have been amended to better point out and distinctly claim the maintenance of the potential artificial algebraic loop solutions while also resolving the artificial algebraic loops. Support for the amended language can be found in the claims as originally presented, such that the addition of new matter has been scrupulously avoided.

To constitute an anticipation under 35 U.S.C. §102, all the claimed elements must be found in exactly the same situation and united in the same way to perform the identical function in a single unit of the prior art. That is, anticipation can only be established by a single prior art reference teaching each and every element of the claimed invention.

In light of the above comments, Applicants respectfully submit that the claims of the present invention are not anticipated by, and are therefore in condition for allowance over, the cited documents. Reconsideration and withdrawal of these rejections is respectfully requested.

Additionally, Applicants agree with the Examiner that the remaining documents cited in the official action are less relevant than those applied by the Examiner. Applicants are therefore not providing any further comments concerning the same at this time.

### CONCLUSION

In view of the foregoing, it is respectfully submitted that this application is now in condition for allowance. Applicants courteously solicit allowance of the claims in the form of a Notice of Allowance. Should there be any outstanding issues of patentability following the entry of this response, a telephone interview is respectfully requested to resolve such issues.

Please charge any shortage or credit any overpayment of fees to our Deposit Account No. 12-0080. In the event that a petition for an extension of time is required to be submitted herewith, and the requisite petition does not accompany this response, the undersigned hereby petitions under 37 C.F.R. §1.136(a) for an extension of time for as many months as are required to render this submission timely. Any fee due is authorized to be charged to the aforementioned Deposit Account.

In view of the above amendment, Applicants believe the pending application is in condition for allowance.

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Respectfully submitted,

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